



2019-2020 Winter Preparedness Policy Session Illinois Commerce Commission

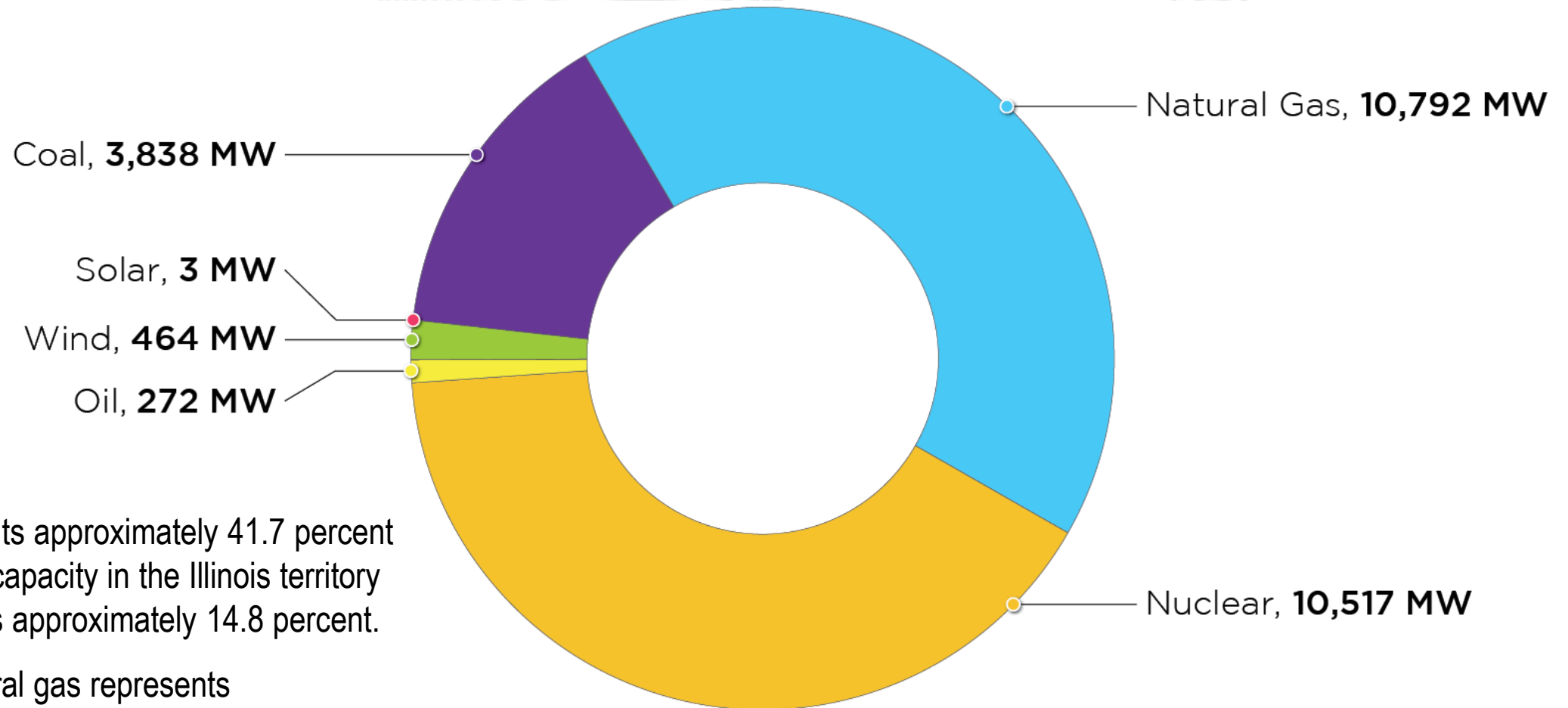
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PJM Interconnection
December 3, 2019

- **Forecast:** PJM forecasts winter peak demand at approximately 134,000 MW
 - PJM has over 187,000 MW of supply and demand-side resources
 - PJM's all-time winter peak is 143,434 MW, set on Feb. 20, 2015
- **Analysis:** PJM analyzes the expected demand for electricity, weather predictions and other factors to develop its forecast for winter operations
- **Coordination:** PJM works with members to prepare for cold weather by testing resources, conducting drills and surveying generators for fuel inventory
- **Checklist:** PJM's preparation checklist includes increasing staffing for weather emergencies and maintenance activities to ensure equipment is ready for winter conditions
- **Gas Supply:** PJM closely coordinates with natural gas supply and transportation across the region
- **Pipelines:** PJM studies potential pipeline service disruptions and the effect on generators, and has found that there are no associated reliability concerns for the coming winter.

- **Existing Capacity:** Natural gas represents 41.7 percent of the total installed capacity in Illinois with nuclear a close second at 40.6 percent. Coal only represents 14.8 percent of total installed capacity in Illinois. This differs from PJM where natural gas and coal are at 40.2 and 30.7 percent of total installed capacity.
- **Interconnection Requests:** Natural gas represents approximately 71.9 percent of new interconnection requests in Illinois.
- **Deactivations:** 304 MW of capacity within the Illinois territory gave a notice of deactivation in 2018.
- **RTEP 2018:** Illinois RTEP 2018 projects total over \$159 million in investment. Approximately 48.5 percent of that represents supplemental projects. These investment figures only represent RTEP projects that cost at least \$5 million.
- **Load Forecast:** Illinois load growth is nearly flat, averaging between 0.2 and 0.3 percent per year over the next 10 years. This aligns with PJM RTO load growth projections.

Illinois – Existing Installed Capacity

(MW submitted to PJM, December 31, 2018)



Summary:

Natural gas represents approximately 41.7 percent of the total installed capacity in the Illinois territory while coal represents approximately 14.8 percent.

Overall in PJM, natural gas represents approximately 40.2 percent of installed capacity while coal represents 30.7 percent.

Illinois – 2019 Load Forecast Report

Transmission Owner	Summer Peak (MW)			Winter Peak (MW)		
	2019	2029	Growth Rate (%)	2018/19	2028/29	Growth Rate (%)
Commonwealth Edison Company	21,890	22,514	0.3%	15,515	15,806	0.2%
PJM RTO	151,358	156,689	0.3%	131,082	136,178	0.4%

* PJM notes that it does not serve the entire state of Illinois.

Pre-Winter Reactive Capability Verification

Cold Weather Checklist

Seasonal Fuel Inventory and Emissions Survey

Periodic Survey – Generating Facility Min Operating Temperature

Cold Weather Exercise

NERC Webinar – Winter Preparation for Severe Cold Weather

Cold Weather Preparation Guideline and Checklist

- Provides generators with a guide to prepare units for cold weather operation
- Based on Manual 14-D, Attachment “N”
- Survey in eDART
 - Open November 1st – December 15th
 - Option of using the PJM or equivalent checklist

Seasonal Fuel Inventory and Emissions Survey

- Required for reliable operations planning purposes
- Focused on fuel supply and delivery details, fuel inventory and emissions limitations
- Enhance PJM situational awareness in preparation for severe weather
- Survey open in eDART October 14th through November 22nd

Allow units to identify and correct start-up, operational, and fuel switching issues prior to cold weather operations

Compensation for non-CP generators only

Eligibility

Non-eligible units are still encouraged to self-schedule to verify cold weather operation

Unit type is not nuclear or renewable

Unit has not operated on primary or alternate fuel for 8 weeks prior to November 1st

Unit, as modeled in Markets Gateway, did not clear any Capacity Performance MWs for the 2019/2020 BRA

NERC Winter Prep Webinar

- Held on Thursday, 9/5/19, 1400-1500
- Covered all types of resources, including renewables and storage
- Included discussion on development of new NERC standards specific to plant cold weather operating limits

Recorded session available at:

<https://cc.readytalk.com/cc/playback/Playback.do?id=col5ek>

Presentation slides available at:

https://www.nerc.com/pa/rrm/Webinars%20DL/Winter_Weather_Prep_Webinar_20190905.pdf

- Background
 - WWRT is part of the Reserve Requirement Study (RRS), which also calculates the Installed Reserve Margin (IRM) and the Forecast Pool Requirement (FPR)
 - WWRT is a target value that is supplied to the PJM Operations Department which uses it to coordinate planned generator maintenance scheduling during the winter period
- Objective
 - Cover against uncertainties associated with load and forced outages during the winter months so that winter LOLE is practically zero